

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-18 are cancelled.

Claim 19 (New): A method of preparing foundry sand from particles of a base material with no thermal treatment of said sand, comprising the steps as ordered of:

shaping the particles through treatment in a controlled energy impactor, said treatment causing the particles to collide with one another such that surface irregularities are chipped away to produce smoothed particles;

directing the smoothed particles to an air classifying system coupled to said controlled energy impactor, said air classifying system separating said smoothed particles to produce at least one grade of finished sand.

20 (New): A method of preparing foundry sand from particles of a base material with no thermal treatment of said sand, comprising the steps as ordered of:

shaping the particles through treatment in a controlled energy impactor, said treatment causing the particles to collide with one another such that surface irregularities are chipped away to produce smoothed particles;

directing the smoothed particles to an air classifying system coupled to said controlled energy impactor, said air classifying system separating said smoothed particles to produce at least one grade of finished sand and at least one oversize fraction; and

returning the oversize fraction to the controlled energy impactor in a sand recycle loop for repeat attrition by said impactor and subsequent classification by said air classifying system.

21 (New): The method as set forth in claim 20, wherein the controlled energy

impactor is operated at a throughput rate higher than a throughput rate of said air classifying system, excess output from said impactor being returned to an input of said impactor for repeat attrition.